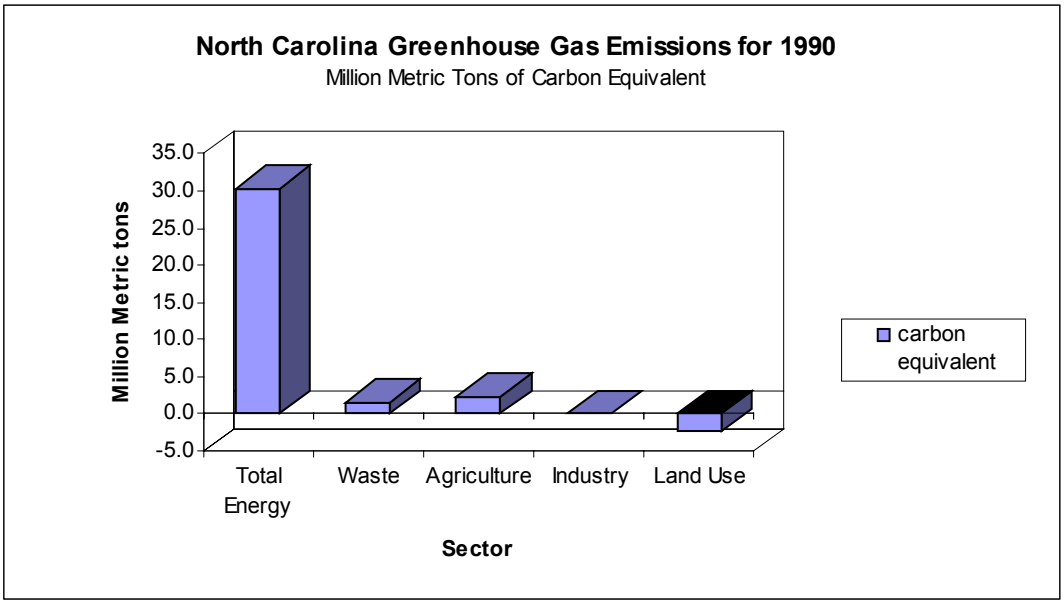
NORTH CAROLINA GREENHOUSE GAS EMISSIONS AND SINKS INVENTORY: SUMMARY



The report *"The North Carolina Greenhouse Gas Emissions Inventory for 1990"* provides a detailed inventory of greenhouse gas emissions and sinks for North Carolina in 1990. Emissions were estimated using methods from EPA's 1995 guidance document ***State Workbook: Methodologies for Estimating Greenhouse Gas Emissions***. In 1990, North Carolina emitted 31.9 million metric tons of carbon equivalent (MMTCE). Additionally, North Carolina estimated emissions of less than 6.2 MMTCE from biomass fuels and from other sources as well as 1.0 MMTCE of emissions from ozone-depleting substance substitutes (ODS). Emissions from these sources are not included in the reported total or the table below.[1,2]

The principal greenhouse gases were carbon dioxide, comprising 101.9 million metric tons (27.8 MMTCE), and methane, with 0.6 million metric tons (3.5 MMTCE). Other emissions included over 7 thousand metric tons of nitrous oxide (0.6 MMTCE).

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[1] Note that the state of the art emission inventory method has advanced since North Carolina completed its inventory; therefore, we have made the following adjustments to North Carolina's emission estimates. We excluded emission estimates for sources not covered by the most recent inventory guidance (http://www.epa.gov/ttnchie1/eiip/techrep.htm#green). These emissions include 1) carbon dioxide from transportation of imported uranium and coal, from natural gas distribution, and from humans; 2) methane from the production of imported coal, wetland drainage, waste combustion, and from humans and deer; 3) nitrous oxide from lime processing, and from soil disturbances; and 4) emissions of substitutes of ozone-depleting substances.

[2] In addition, the North Carolina inventory estimated emissions of non-methane volatile organic compounds, carbon monoxide, and nitrogen oxides, which are greenhouse gases for which global warming potentials have not yet been developed.

North Carolina Greenhouse Gas Emissions for 1990

BY SECTOR	CO2 (MMTCE)	Methane (MMTCE)	Nitrous Oxide (MMTCE)	HFCs, PFCs, and SF6 (MMTCE)	Total GHG Emissions (MMTCE)
Energy - Residential	1.4	*	*	*	1.4
Energy - Commercial	0.9	*	*	*	0.9
Energy - Industrial	5.8	*	*	*	5.8
Energy - Transport	10.4	*	*	*	10.4
Energy - Utility	11.4	*	*	*	11.4
Energy - Exported Electricity	*	*	*	*	*
Energy - Other	*	0.2	0.3	*	0.5
Total Energy	**29.8**	**0.2**	**0.3**	*	**30.4**
Waste	**0.1**	**1.4**	*	*	**1.5**
Agriculture	**0.1**	**1.9**	**0.3**	*	**2.3**
Industry	**0.1**	*	*	*	**0.1**
Land Use	**-2.4**	*	*	*	**-2.4**
Total	**27.8**	**3.5**	**0.6**	*	**31.9**

All emissions are reported in million metric tons of carbon equivalent (MMTCE).

An asterisk (*) indicates that emissions of the gas from this sector were zero, insignificant, or not reported.

Emissions due to coal mining and extraction of natural gas and oil are included in the energy – other figures, and emissions from biofuel combustion are excluded.

The major source of carbon dioxide emissions was fossil fuel combustion (99%) with minor emissions (<1%) from lime processing, agricultural use of limestone, and waste combustion. Carbon dioxide sinks (i.e., an increase in forest carbon storage) offset about 8% of the total carbon dioxide emissions. Contributors to methane emissions included manure management (49%), landfills (38%), domesticated animals (6%), fossil fuel combustion (5%), natural gas systems (1%), and agricultural burning (<1%). Nitrous oxide emissions were accounted for by fossil fuel combustion (54%), fertilizer use (46%), and agricultural burning (<1%).

North Carolina emissions in 1990 were 4.8 MTCE per capita, compared to 1990 U.S. emissions of 6.4 MTCE per capita.